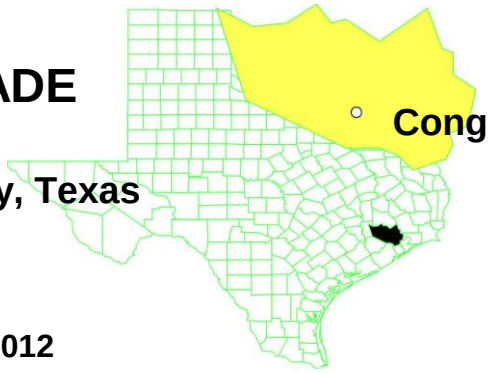
SOUTH CAVALCADE STREET

Houston, Harris County, Texas

EPA ID# TXD980810386
Site ID: 0602895



EPA Region 6
Congressional District 18

Last Updated: November 2012

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Background

The South Cavalcade Superfund Site occupies approximately 66 acres of land located approximately three miles north of downtown Houston, Texas, and about one mile southwest of the intersection of Interstate Loop 610 and U.S. Highway 59. The Site is bounded by Cavalcade Street to the north, Collingsworth Street to the south, and the Missouri and Pacific Railroads to the east and west. The Site is situated in what would be considered a light industrial corridor, but is bounded on the west side by a large residential area. The Site is rectangular in shape and is approximately 3,400 feet long in the north-south direction by 900 feet long in the east-west direction.

A wood treating plant operated at the Site from 1910 until 1962. Creosote and various metallic salts were used as the wood preservatives. The wood treating process area was located in the southern portion of the Site along Collingsworth Street. Koppers Company, Inc. (Koppers), now known as Beazer, operated the wood treating facility from 1940 until its closure in 1962. A coal tar distillation plant was also operated by Koppers on the southeastern portion of the Site from about 1944 until 1962.

The Site is currently occupied by three trucking firms, with much of the ground surface (particularly in the southern half of the site) covered by pavement, buildings, or storage areas. A ground water treatment facility is located at the eastern boundary in the central portion of the Site and is un-operational. Two areas of contaminated soil, along the southeastern boundary and in the southwestern portion of the Site, have been capped and are being used for truck parking. The northern contaminated area of the site is currently not being used by any businesses.

Site Photos

Wastewater Treatment Plant

Office Trailer

South Cap

West Cap

Current Status

EPA, the Texas Commission on Environmental Quality (TCEQ), and the Site's Responsible Party, Beazer East, Inc. (Beazer), have been discussing different ground water remedial options for the Site, including a natural attenuation component. To support a possible modification of the current remedy, Beazer completed additional field work (9/2005) to better define the ground water plume at the southwest corner and the preferential migration pathways in the shallow (~ 22' below ground surface) and intermediate (~40-50' below surface) aquifers. This additional information is summarized in the S*upplemental Ground Water Investigation Report* (March 1, 2006) submitted to EPA. The first Site Map (included below) is taken from this report and illustrates the inferred boundaries of Dense Non-Aqueous Phase Liquid (DNAPL) for both aquifers.

Based on the results of the investigation and previous fate and transport reports, Beazer has submitted in May 2007, a follow-up draft Focused Feasibility Study (FFS) to evaluate the current remedy, as well as other options to address the impacted ground water. A meeting was held on June 26, 2007 and on November 29, 2007 with Beazer and the regulators to discuss comments to the draft FFS. Beazer has submitted a draft Technical Impracticability (TI) Demonstration Report to the regulators in November 2008. The draft FFS and draft TI demonstration report needs to be finalized. EPA, TCEQ, and Beazer met on January 18, 2011 to discuss plans for a ROD Amendment for the change in the groundwater remedy of the site from extraction and treatment to Monitored Natural Attenuation (MNA) and establishing TI zones at the site. EPA HQ has reviewed the MNA and TI waiver document and has provided comments. Beazer has prepared a matrix evaluating different technologies for the site to address those comments. A meeting between EPA HQ, EPA R6, TCEQ and Beazer was held on December 14th and Beazer is evaluating remedies for the northern portion of the site. Beazer has submitted an FFS Amendment with the additional remedial options. EPA, TCEQ, and Beazer discussed the FFSA on May 16, 2012 and have requested Beazer to further delineate the saturated source area. Beazer plans to install additional borings in October to verify historical boring log information. EPA and the TCEQ discussed the draft Human Health Risk Assessment Report and provided comments to Beazer. Beazer has completed the drilling of borings in October in the northern area to confirm the nomenclature of the varying levels of contamination. Beazer is evaluating the information collected. A discussion between EPA, TCEQ, and Beazer is scheduled for November 16th to discuss the evaluation and determine steps to be taken.

The Harris County Toll Road Authority (HCTRA) is planning a north-south extension of the Hardy Toll Road, to be built in the rail right-of-way adjacent to the western boundary of the Site. The Toll Road, if constructed as planned, would further separate these industrial properties from the residential areas to the west. The HCTRA is also planning on expanding Collingsworth Street adjacent to the southern boundary of the Site.

The EPA, TCEQ and Beazer have been having discussions with the HCTRA regarding their plans of a north-south extension of the Hardy Toll Road adjacent to the western boundary of the Site and an east-

west expansion of Collingsworth Street adjacent to the southern boundary of the Site. Several meetings and discussions have been held between EPA, TCEQ, Beazer, HCTRA, and City of Houston (COH) personnel to discuss the project. The discussions continue with the HCTRA regarding the plans. HCTRA met with EPA on January 26, 2010 and followed that up with a letter seeking EPA's concurrence on their approach to environmental management practices during construction. EPA has concurred/responded to the specific management practices listed in the letter on February 26, 2010. HCTRA has received approval for the project and soil sampling of the Collingsworth Road along the Site was completed in June. EPA and TCEQ met with ENVIRON (Technical Consultants to the Railroad and to HCTRA) and COH on October 9th, 2012 to discuss status of the Railroad relocation of fiber optic lines, the Collingsworth Bridge project, and Toll Road Expansion.

Benefits

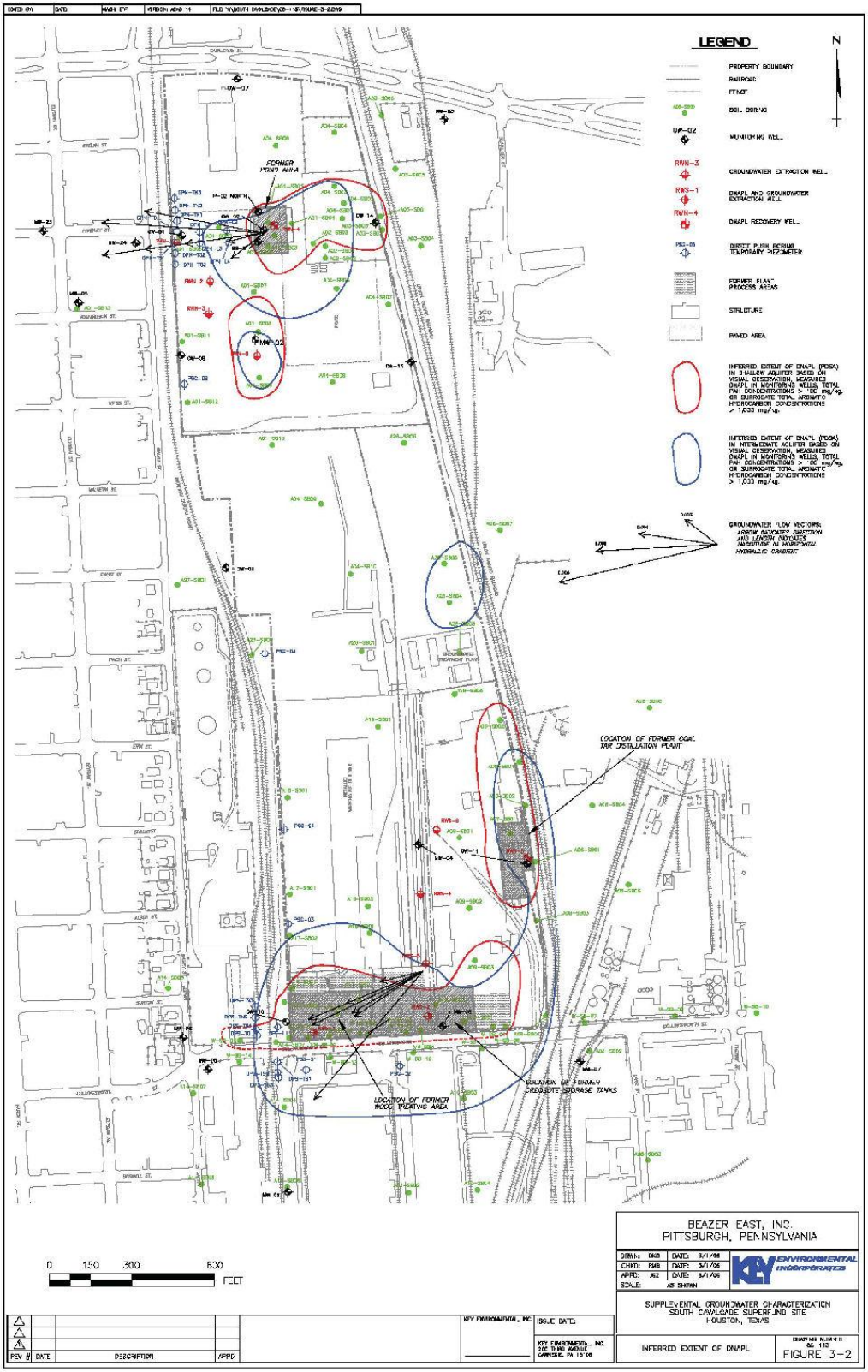
Contaminated soils have been contained and capped in two separate areas of the Site, eliminating any potential for direct contact with impacted soils and ensuring current and future protection of human health and the environment.

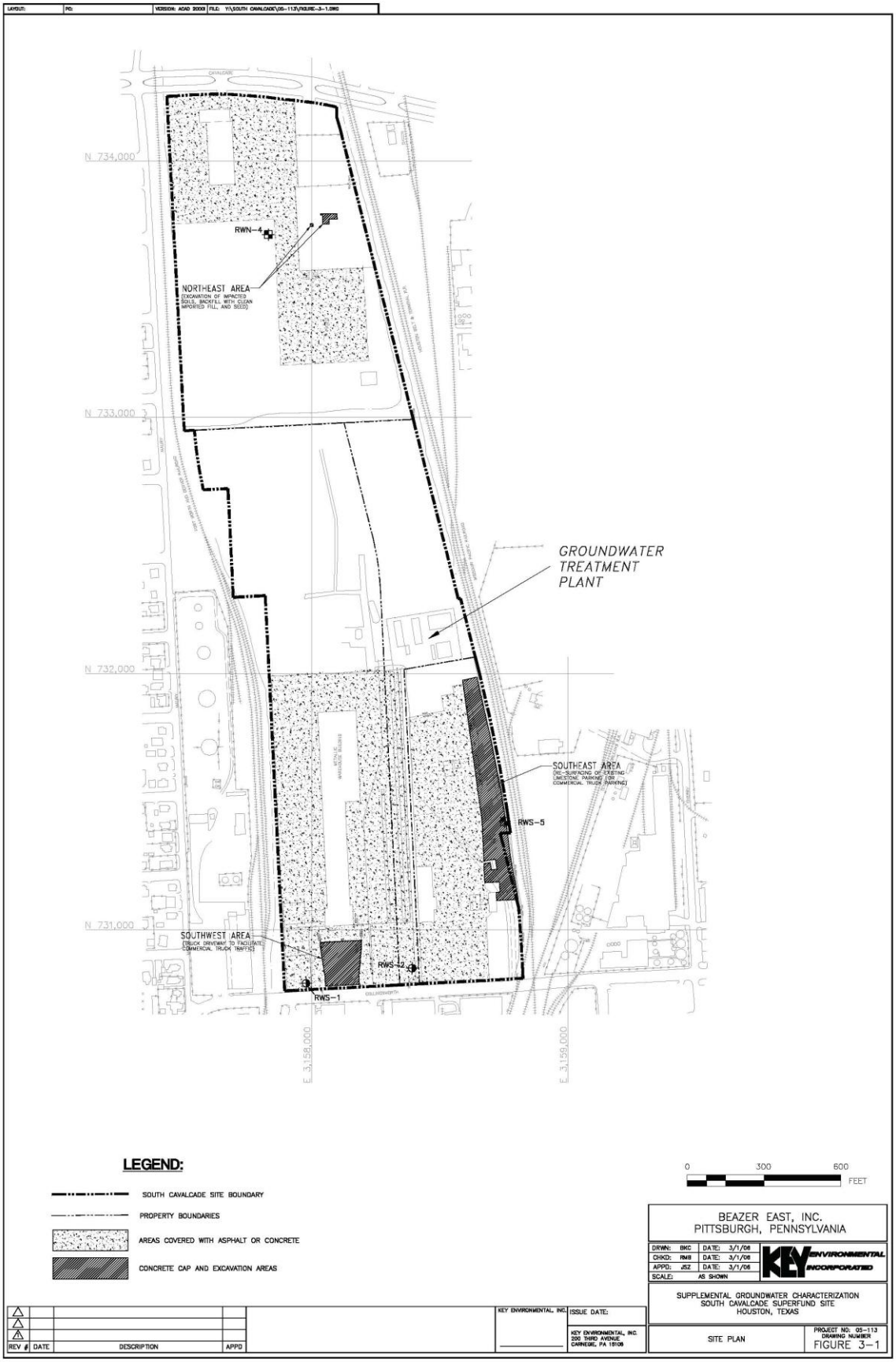
The DNAPL extraction system, in operation since 1996, has removed over 4000 gallons of product. The 1988 Record of Decision requires that ground water extraction continue until contaminants have been removed to the maximum extent practicable, through treatment to drinking water standards and no detectable polynuclear aromatic hydrocarbons (PAHs). That remedial goal is currently being re-evaluated, along with other options including a monitored natural attenuation remedy component. There is, however, no known exposure to contaminated ground water in the area. Drinking water is provided by the City's municipal water system, and there is no indication of private well use down gradient from the Site. Institutional controls have been established at the Site to ensure that future use will remain non-residential and to prohibit on-site ground water use.

National Priorities Listing (NPL) History

NPL Inclusion Proposal Date:	October 5, 1984
NPL Inclusion Final Date:	June 10, 1986
HRS Score:	38.69

Site Maps


LEGEND
PROPERTY BOUNDARY
RAILROAD
FENCE
SOIL BORING
MONITORING WELL
GROUNDWATER EXTRACTION WELL
DNAPL AND GROUNDWATER EXTRACTION WELL
DNAPL RECOVERY WELL
DIRECT PUSH BORING TEMPORARY PIEZOMETER
FORMER PLANT PROCESS AREAS
STRUCTURE
PAVED AREA
INFERRED EXTENT OF DNAPL (PDSA) IN SHALLOW AQUIFER BASED ON VISUAL OBSERVATION, MEASURED DNAPL IN MONITORING WELLS, TOTAL PAH CONCENTRATIONS > 100 mg/kg, OR SURROGATE TOTAL AROMATIC HYDROCARBON CONCENTRATIONS > 1,000 mg/kg.
INFERRED EXTENT OF DNAPL (PDSA) IN INTERMEDIATE AQUIFER BASED ON VISUAL OBSERVATION, MEASURED DNAPL IN MONITORING WELLS, TOTAL PAH CONCENTRATIONS > 100 mg/kg, OR SURROGATE TOTAL AROMATIC HYDROCARBON CONCENTRATIONS > 1,000 mg/kg.
GROUNDWATER FLOW VECTORS: ARROW INDICATES DIRECTION AND LENGTH INDICATES MAGNITUDE IN HORIZONTAL HYDRAULIC GRADIENT
FORMER MW-4
LOCATION OF FORMER COAL TAR DISTILLATION PLANT
LOCATION OF FORMER WOOD DREYING AREA
LOCATION OF FORMER CREOSOTE STORAGE TANKS
0 150 300 600
FEET
BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
ENVIRONMENTAL INCORPORATED
SUPPLEMENTAL GROUNDWATER CHARACTERIZATION
SOUTH CAVALCADE SUPERFUND SITE
HOUSTON, TEXAS
INFERRED EXTENT OF DNAPL
FIGURE 3-2


N 734,000
N 733,000
N 732,000
N 731,000
E 3,158,000
E 3,159,000
RWN-4
NORTHEAST AREA
EXCAVATION OF IMPACTED SOILS, BACKFILL WITH CLEAN IMPORTED FILL, AND SEED)
GROUNDWATER TREATMENT PLANT
SOUTHEAST AREA
RE-SURFACING OF EXISTING LIMESTONE PARKING FOR COMMERCIAL TRUCK PARKING)
RWS-5
SOUTHWEST AREA
(BUCK DRIVEWAY TO FACILITATE COMMERCIAL TRUCK TRAFFIC)
RWS-2
RWS-1
LEGEND:
SOUTH CAVALCADE SITE BOUNDARY
PROPERTY BOUNDARIES
AREAS COVERED WITH ASPHALT OR CONCRETE
CONCRETE CAP AND EXCAVATION AREAS
0
300
600
FEET
BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
DRWN: BKC DATE: 3/1/06
CHKD: RMB DATE: 3/1/06
APPD: JSZ DATE: 3/1/06
SCALE: AS SHOWN
KEY ENVIRONMENTAL INCORPORATED
SUPPLEMENTAL GROUNDWATER CHARACTERIZATION
SOUTH CAVALCADE SUPERFUND SITE
HOUSTON, TEXAS
SITE PLAN
PROJECT NO: 05-113
DRAWING NUMBER
FIGURE 3-1
REV # DATE DESCRIPTION APPD
KEY ENVIRONMENTAL, INC.
ISSUE DATE:
KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

Wastes and Volumes

National Lumber and Creosoting Company constructed and operated a wood preserving facility on the Site from 1910 to 1938, at which time the property was acquired by the Wood Preserving Corporation, a subsidiary of Koppers Company. In 1940, that Corporation became a part of Koppers Company, Inc., now known as Beazer East, Inc., and operated the wood treating facility from 1940-1962. Koppers constructed a coal tar distillation plant in the southeastern portion of the Site, which operated from 1944 to 1962, at which time the property was again sold, and later subdivided.

In 1983, the Houston Metropolitan Transit Authority investigated the Site for potential use and found evidence of creosote in the subsurface. The site was referred to the Texas Department of Water Resources (TDWR) for further investigation and, in 1984, recommended to EPA for placement on the National Priorities List (NPL). The Site was added to the final List on June 10, 1986, for further assessment and remedial action.

The two capped areas of contaminated soils, associated with these operations, are shown on the second Site Map. Areas of ground water contamination have been defined for both the shallow and intermediate aquifers, as indicated on the first Site Map.

Health Considerations

Primary risk from the site stems from the carcinogenic polynuclear aromatic hydrocarbons (cPAHs), volatile organics, and metal salts associated with creosote and the wood preservation process. These constituents are found both in the contaminated soils and in ground water, as DNAPL and dissolved-phase constituents.

Record of Decision (ROD)

The Record of Decision for the Site was signed by EPA on September 26, 1988, and remedies selected for surface soils (0-6”), surficial soils (0-6’ below ground surface), and ground water:

Soils: The ROD recommended soil flushing and washing to reach a risk-based remedial goal of 700 parts per million for carcinogenic PAHs, based on ingestion and direct contact. A subsequent pilot study demonstrated that the contaminants would not reduce to the required levels. Beazer East, Inc. submitted a proposal to contain contaminated soils under a protective cap. On June 26, 1997, the Regional Administrator signed an Amended ROD to allow contaminants to be sealed and contained under a six-inch thick reinforced concrete cap. Two areas of contaminated soils were capped, with a remedial design that optimized reuse of the property as parking space for trucks. Construction was completed in June 2000.

Ground Water: The ROD required the extraction and treatment of contaminated ground water, including the recovery and treatment of a (DNAPL) to the maximum extent practicable. Remaining contamination would then be allowed to naturally attenuate to background levels. The decision document also allowed biological treatment to reach remedial goals.

In 1995, EPA agreed to reconsider the remedial goals outlined in the 1988 ROD against other options, including monitored natural attenuation or a Technical Impracticability (TI) waiver. Beazer East, Inc. has since submitted additional ground water information to support re-evaluation of the remedy and discussion of an appropriate ground water monitoring network. Any new remedial options not specified in the 1988 ROD will be considered through the remedy decision process as a ROD Amendment or Explanation of Significant Differences. See the “Current Status” section for an update on this process.

The second Five-Year Review for the South Cavalcade Superfund Site, signed in September 2007, evaluated the effectiveness of the current remedies in place. In summary, the review found the remedy

implemented for contaminated soils to be protective of human health and the environment. The ground water remedy was also considered protective in the short-term; long-term protectiveness depends on the demonstration that the DNAPL and plume are not migrating vertically and horizontally. The second Five-Year Review for the South Cavalcade Superfund Site is available at http://www.epa.gov/earth1r6/6sf/pdffiles/scavalcade_5_year_review.pdf.

Site Contacts

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EPA Superfund Region 6 Toll Free Number: 1-800-533-3508
TCEQ Superfund Toll Free Number: 1-800-633-9363

Information Repository:
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Government Documents area
500 McKinney
Houston, Texas 77002